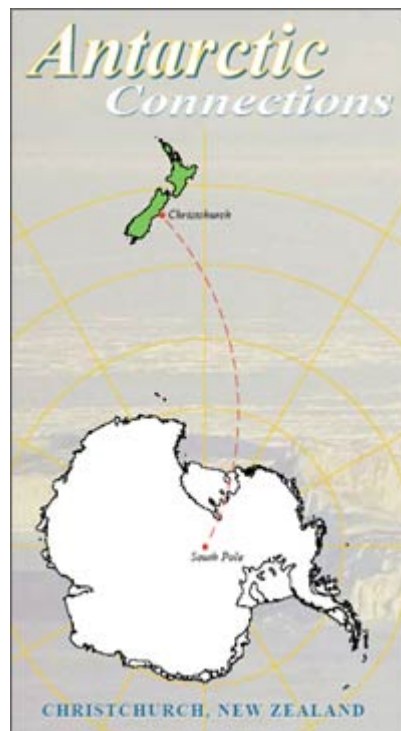


# Christchurch: the leading Antarctic gateway city?



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## **Introduction**

The aim of this paper is to explore the concept of Christchurch being the leading Antarctic gateway city. It will define what combination of qualities and offerings are expected of the world's best gateway to the ice and compare these to what Christchurch is currently offering.

Initially the paper will explore the concept of a gateway city, and examine the function and offerings of various gateway cities around the world, however, for the purposes of this project the focus for the main comparison will be between Christchurch and Hobart due to the close physical location and access to the Ross Sea region. The final section will explore how "leading" can be qualified and measured.

According to the Oxford dictionary a gateway is defined as "a settlement, usually occupying a favourable commanding site, which acts as a link between two areas". However, it is now recognised that this gateway role has grown as intermediate destinations for those people with an interest in Antarctica.

This has been facilitated by the local and national governments who recognise an opportunity for regional and economic development. Recent economic impact studies recognise the financial gains with respect to the supply function of the gateway cities and ports. For example, a recent economic impact study in Canterbury estimates that Antarctic related activity benefits the region to around \$155.1 million per annum and creates employment opportunities for 1256 people. (Saunders et al. 2007) According to Hall and Johnston (1995) the economic and commercial exploitation of the Antarctic has in the past tended to concentrate on issues such as fisheries, oil and mineral exploitation but more recently tourism has been the focus.

For Antarctica, the major air and ship gateway cities other than Christchurch are located in Punta Arenas in Chile, Ushuaia in Argentina, Stanley, Malvinas-Falklands, Cape Town in South Africa and Hobart in Australia.

The gateway function for each of these destinations varies according to the nature of the transport network to Antarctica for example, Hobart has served as a ship base for supply, tourism and exploration however, earlier this year Hobart also established an air link direct to the Australian base in Antarctica. The majority of visitors to Antarctica use the South American gateway of Ushuaia, only a small number travel from New Zealand and Hobart. Ushuaia is the dominant gateway in South America for the peninsula whilst Hobart and Christchurch are dominant gateways for the Ross Sea region.

The following section explains the theoretical concepts of competitive advantage and how this can be used in terms of qualifying as “the leading Antarctic gateway city.”

An underlying aspiration of any organisation or group of organisations such as those involved with providing services to the Antarctic community in any gateway city, when formulating a business strategy is the attainment and sustainability of competitive advantage: being the best and therefore leading gateway city. Generally, competitive advantage is manifested in a source of superior performance. Potential sources are many, but the dominant marker for developing and sustaining competitive advantage is value creation, and first and foremost is the concept of customer value. For the organisation to choose the most appropriate strategic choices to meet the customer needs questions to be answered include:

- What market segment or market segment should the company serve?
- What resources and capabilities are required to create, produce and continually innovate around the services that will meet the needs of the market segment or segments served?
- How will the organisation position itself against its rivals?
- What business model should the organisation pursue?

Organisations seek to develop a source or sources of competitive advantage to meet customer needs in a way that rivals cannot, which in turns brings about superior performance. (Hill et al. 2007)

Four factors that influence an organisation's and therefore gateway city's, ability to build and sustain a competitive advantage include: efficiency, quality, innovation and responsiveness to customers.

### Efficiency

Efficient use of resources for any gateway city transforming inputs such as land, capital, management and technological know-how into goods and services that the Antarctic community wish to use or purchase has to be of major importance. All gateways have finite resources and infrastructure from which to build the service offerings.

### Quality

Quality services are defined as services that are reliable, in the sense that they do the job that they were designed to do and do it well, which increases perceived value but that also are differentiated by attributes that customers perceive to have a higher value. (Hill et al 2007). For any gateway city that wants to be known as the best, it is the reliability of the services they offer that not only has to be achieved but maintained.

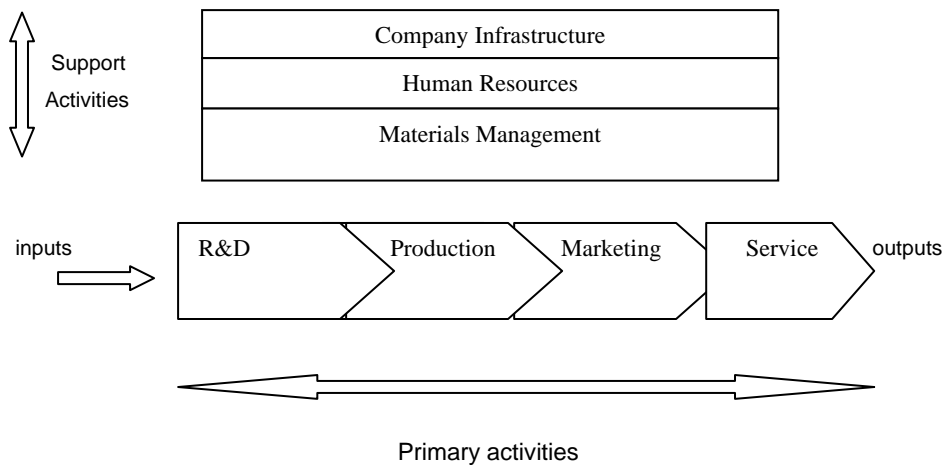
### Innovation

Innovation is perhaps the single most important building block of competitive advantage. Innovations provide an organisation with a uniqueness that is something that its competitors lack. Uniqueness lets an organisation differentiate itself from its rivals. For the South American Antarctic gateways location and accessibility to the Antarctic peninsular that could be classed as the unique differentiating feature compared with the Christchurch and Hobart gateways.

### Responsiveness to customers

To achieve superior customer responsiveness an organisation must be able to do a better job than its competitors of identifying and satisfying the needs of its customers. Improving the quality of an organisations offering is consistent with achieving responsiveness as is the need to customise goods and services to the unique demands of individual customers or customer groups.

## The Value Chain



A gateway city can be thought of a chain of activities for transforming inputs from various organisations into outputs that customers value. Customers can be anyone with an interest in the Antarctic for example NAPs, tourists, local public, local supply organisations, cultural facilities etc . Primary activities have to do with the design, creation and delivery of the service as well as the marketing and its support and after sales service. Primary activities can be broken into four functions: research and development, production, marketing and service.

Research and development is concerned with the design of goods and services. R&D can increase the functionality of the product or service therefore making it more attractive to consumers.

Production is concerned with the creation of a service, value is created if an organisation performs consistently to a high standard

Marketing function of an organisation helps to create value through brand positioning and advertising, the marketing function can increase the value that customers perceive in a company's service.

The role of the service function of an organisation is to provide on-going support to the customers, this can create a perception of superior value in the minds of customers.

The support activities of the value chain provide inputs that allow for the primary activities to take place. The human resources function ensures the organisation has the right mix of skilled people to perform its value creation activities effectively.

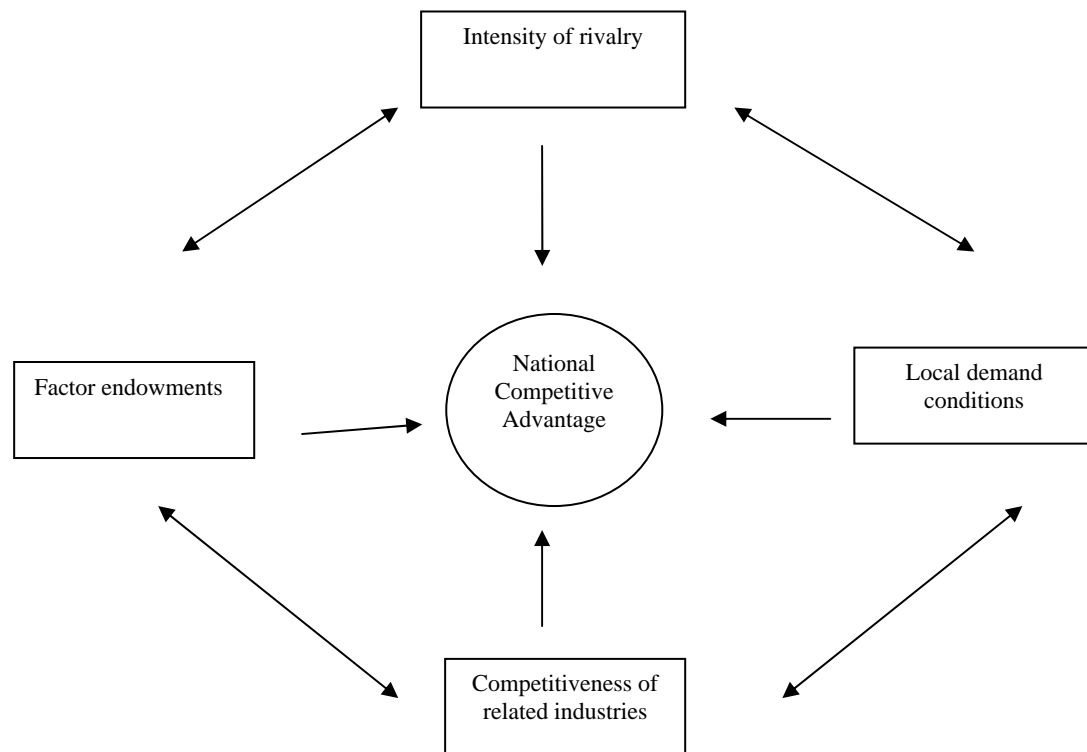
Information systems, when coupled with the internet provide efficient and effective communication tools that an organisation can use to manage its other value creation activities.

Strong leadership can shape the organisation's infrastructure and through it the performance of all other value creation activities within the organisation. (Hill et al.2007)

Antarctic gateway cities operate in an international context this can affect the nature of the strategy for developing competitive advantage.

According to Porter (1990) there are four main attributes of a nation state that have an important impact on the global competitiveness of companies located in that nation:

- Factor endowments: a nation's factors of production, such as skilled labour or the infrastructure necessary to compete in a given industry.
- Local demand conditions: the nature of domestic demand for that service.
- Competitiveness of related and supporting industries: the presence or absence of supplier industries and related industries that are internationally competitive.
- Strategy, structure and rivalry: the conditions in the nation governing how companies are created, organised and managed and the nature of domestic rivalry.



Porter (1990) talks of the four attributes constituting the diamond as illustrated above, in that all four factors need to be favourable in order for the organisation or, in this case gateway to be successful.

With factor endowments, Porter follows basic economic theory in that the cost and quality of production such as land, labour and capital, technological know-how and the physical infrastructure such as roads and ports etc. are the prime determinants of competitive advantage that certain nations may have in certain areas.

Local demand conditions provide the impetus for up grading competitive advantage. Companies and therefore gateway cities are typically more sensitive to the needs of their closest customers. Porter (1990) argues that a nation's companies (and therefore of a gateway city) gain competitive advantage if their domestic consumers are sophisticated and demanding.

National presence of related and supporting industries that are internationally competitive can be a positive attribute the gateway advantage. One consequence of this is that successful industries within a country tend to be grouped together into clusters of related industries, ship and boat maintenance, an excellent example of this Cape Town.

The fourth attribute of national competitive advantage in Porter's model is the strategy, structure and rivalry of companies. This includes the different management ideologies that characterise different countries, vigorous domestic rivalry induces companies to innovate, improve quality, reduce costs and invest in up grading advanced factors. (Hall et al 2007)

Porter (1990) also contends that governments can affect factor endowments through subsidies, policies on capital markets, policies on education etc.

Government policy can also influence supporting and related industries through regulation, and rivalry through capital market regulation, tax policy and anti competitive legislation. (Hall et al. 2007)



## **A brief description of the major gateway cities of Ushuaia, Punta Arenas and Cape Town**

### **Ushuaia**

Is a small city at the southern tip of Argentina is often referred to as “The City at the End of the World” because of its extreme southern location. This city stands in a sheltered bay on Isla Grande de Teirra del Fuego. In the 1980s, this city became the administrative capital of the Province of Tierra del Fuego, Antarctica and the South Atlantic Islands. In 1982, it also attracted the Centro Austral de Investigaciones Cientificas (CADIC). This is a scientific organization specializing in anthropological and biological research in the region. (wikipaedia)

Between these activities and the expansion of its airfield to accommodate larger plans, Ushuaia has captured the increasing tourist traffic for Antarctica. Many of the Antarctica travellers depart from this city but it is generally regarded as only a transfer point on the way south.

The National Antarctic Programmes utilising the services and logistics of Ushuaia includes the British Antarctic programme.



## Punta Arenas

Chile's links to Antarctica date back to the early 19<sup>th</sup> century, when establishing the area operations of the navy, founding father Bernardo O'Higgins defined Chile's limits as stretching not only along the Pacific and Atlantic coasts of Patagonia but also as far as the South Pole. Over the next century, Chile handed out fishing and whaling licences for the Southern Ocean. However, it was not until 1940 that President Aguirre Cerda laid official claim to a wide wedge of Antarctica, taking a 1.5million square kilometers of ice mass, an area twice the size as mainland Chile.

From Punta Arenas, it takes just two and a half hours to fly to Chile's Eduardo Frei Montalva base in Antarctica, as a result it has become a major gateway serving 17 of the 28 national expeditions present in the continent, many of which have bases located near Chile's airstrip on King George Island.

(wikipedia)

## Cape Town

South Africa has long history with early sea explorations dating back to the early 1600s, with Cape Town Harbour being the launching point for many South Sea expeditions. Many whale and seal traders used Cape Town Harbour for ship supplies and repairs, and for trading and bartering purposes. Currently Cape Town harbour is a port of call for many international ships and the harbour boasts a bustling sea-side economy and strong industry infrastructure. This gateway serves as a research and information hub, tourist attraction and Antarctic research vessels docking point, including ship management, warehousing, custom related services and waste handling as most German scientific programmes leave from Cape Town. Tourists can also fly from Cape Town to a runway close to the Russian science base in Antarctica. ([www.alci.info.com](http://www.alci.info.com))



The New Zealand/Australia gateway is often referred to as the Historic Gateway because it was from here the great polar explorers like Scott, Shackleton and Mawson departed for Antarctica. It is also the more challenging of the two major gateway areas. Distances are greater and access is limited to just three months of each year when the fast ice breaks out. The greater distances mean longer expeditions than those from South America and South Africa.



Due to the physical location and service offerings the following section describes both of these gateways in relations to the theoretical concepts of competitive advantage as described earlier in this report .

## **Hobart**

Tasmania has been a major staging post for Antarctic expeditions for more than 200 years and is now a major international gateway for those accessing the Antarctic, sub-Antarctic and Southern Ocean. The Australian Antarctic Division is based in Hobart, it maintains four, year round Australian stations, conducts internationally recognised science activities and provides logistical support to the bases and research programs. Since 1982, Tasmania has hosted the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and the Council of Managers for National Antarctic Programmes (COMNAP) since 1997.

The port houses Australia's Antarctic research ship the Aurora Australis and also the French Antarctic vessel the l'Astrolabe and forward base for Frances's Institute Polaire Francais Paul Emile Victor for its Antarctic station in Dumont d'Urville. Other nations such as Russia, the US, Japan and Spain have also used Hobart as an Antarctic gateway, private expeditions also use the port. Services provided by the port include fuelling, provisioning, stevedoring, maintenance, accommodation and recreational services. As a port it is open 24 hours, seven days per week, unaffected by tides, currents, depths or external sea conditions. (Antarctic Tasmania Prospectus)

The Australian Antarctic Division's air link began operating between Hobart and Casey Station this season. Operating between the months of October and February each season the air link will enable the Division to transport scientists and tourists in as little as 5 hours.

Businesses serving the Antarctica, sub-Antarctica and Southern Ocean community are a key industry sector for Tasmania. The Tasmanian government actively supports these activities to ensure they attain their full potential in generating political, economic, scientific, cultural and social benefits. To do this a dedicated Antarctic affairs office (Antarctic Tasmania) has been developed guided by formal government policy for the region.

Annual investment in the Antarctic programme by the Australian Government is A\$121.6 million. (Australian Govt 2008) This includes A\$21.6 million to the Mawsons Hut Foundation ([www.aad.gov.au](http://www.aad.gov.au))

Hobart is also home to many Antarctic cultural resources and attractions such as the Islands to Ice gallery at the Tasmanian Museum and art gallery, the Antarctic Polar Pathways walk around the city, designed to help visitors explore Hobart's Antarctic and Southern Ocean sites, and visitor display at the Antarctic Division. Hobart also celebrates the Antarctic Midwinter Festival in June, the festival includes open days, exhibitions, lectures and Antarctic themed entertainment.

From this information it can be deduced that the Tasmanian government recognises the value of the state's Antarctic sector in making an economic, social and cultural contributions to Tasmania. The Tasmanian Government has a vision for Hobart and the state to be recognised globally as the world's pre-eminent international gateway to the Antarctic, sub-Antarctic and Southern Ocean. (Tasmanian Govt 2004)

Tasmania's significance as an operational gateway is evident in the fact that the Australian Antarctic Division's headquarters are based near Hobart. Innovation and responsiveness to customers is reflected in the opening of the air-link to Casey Station. Relating to the value chain concept of maintaining the best possible organisational infrastructure, Tasmania is the only Australian state to offer a dedicated office of Antarctic affairs (Antarctic Tasmania). The office works actively to support Antarctic institutions through collaborative programs and initiatives, ranging from disseminating Antarctic information and providing conference incentive program, to running the Antarctic festival. (Tasmanian Govt 2004) The Tasmanian government has a powerful marketing strategy that actively promotes Hobart as the gateway city of choice. Smart, glossy brochures, up-to date web site and information portals all help to maintain the state of the art, efficient offerings Hobart has to offer the Antarctic community.

Continuing with the value chain concept, Hobart and Tasmania is an international centre for excellence for Antarctic and temperate marine science, for example, Tasmania hosts 65% of Australia's Antarctic scientists in various

organisations based in the state. The Institute of Antarctic and Southern Ocean Studies is provided by the University of Tasmania in Hobart. This provides a variety of undergraduate and post-graduate course in Antarctic and marine studies. (Antarctica Tasmania Prospectus)

As an operational gateway, Hobart states that it provides cost -effective and efficient levels of service used by government and private Antarctic and Southern Ocean operators.

Associated with Porters diamond model of national competitive advantage, the endowment factors for Hobart are that it has the local infrastructure of the air port and sea port, adequate service provision and skilled workforce.

As with all service provision, contracts are won by the companies that can offer the best service, local companies in Hobart are supported through the Antarctic office in order to ensure that service provision is of the highest standards to meet the needs of the Antarctic community.

As already stated the Tasmanian government has a clear and stated policy with three clear objectives:

1. increase the size, diversity and economic contribution of Tasmania's Antarctic community to the state.
2. raise the profile of Hobart's contemporary and historic links to the Antarctic, sub-Antarctic and Southern Ocean with Tasmanians and visitors to the state.
3. support endeavours to improve the understanding and management of the Antarctic, sub-Antarctic and Southern ocean eco-systems.

(Tasmanian Govt 1994).

## **Christchurch**

Christchurch's association with Antarctica dates back to great expedition of Scott and Shackleton and as such has been a departure point for exploration and scientific expeditions. It is primarily an aerial gateway supplying science bases for New Zealand, the US and Italy. However, there is also a growing shipping link with the increasing number of cruise ships and science vessels berthing at Lyttelton Harbour.

New Zealand Ministry of Foreign Affairs and Trade's Antarctic Policy Unit is responsible for New Zealand's development and compliance with obligations to the Antarctic Treaty System. However, Antarctica New Zealand is the crown entity responsible for managing New Zealand's National Antarctic Programme, based at the International Antarctic Centre. It is responsible for developing NZ's scientific research strategy and maintains a year round permanent research station, Scott Base on Ross Island. For the financial year ended 2006, Antarctica NZ received \$9.43 million of government funding. Most of the goods and services required to support the New Zealand Antarctic Programme are purchased locally or from elsewhere in NZ. (Saunders et al 2007)

The International Antarctic Centre is also the base for the United States Antarctic Programme (USAP) of the US National Science Foundation. Intercontinental air support between New Zealand and Antarctica is provided by USAP by the US air force. Raytheon Polar Services is the current USAP contractor providing logistical support for the US programme, however, a wide range of goods and services are purchased locally to support the Christchurch operation and the national programme based at McMurdo and Amundsen – Scott.

The Italian Antarctic Programme has a year round office in Christchurch, supporting the Antarctic summer programme.

Christchurch's role as a major gateway is being enhanced by through developments in NZ Antarctic policy and is being actively promoted by the local city council. In order to promote and enhance the value of Antarctic associations a national New Zealand Antarctic Association and the regional body Antarctic Link Canterbury were formed in 2000. Many of the members



are Antarctic related organisations that focus on the growing tourist industry associated with the unique links the city has with Antarctica. Most build on the historical and cultural links with the region such as the Antarctic Visitor Centre, the museum, Antarctic Heritage Trust and Heritage Expeditions, New Zealand's only Antarctic tourist operator, providing a number of cruises to Antarctica and the Sub Antarctic Islands each summer.

Some NZ and a UK commercial fishing company are supported from Lyttelton Harbour and associated facilities.

Gateway Antarctica, the centre for Antarctic Teaching and Research at the University of Canterbury provides undergraduate and post-graduate Antarctic based programmes.

In order to recognise the value of Antarctic associations the Christchurch Development Corporation recently commissioned an economic impact survey for Antarctica and Canterbury. The survey concluded that the total benefit of Antarctic related activity to the Canterbury economy is estimated to be in the region of \$155.1 million, supporting the employment of 2,115 people throughout the county (Saunders et al 2007).

To relate the offerings provide by Christchurch to the value chain concept and Porters diamond concept of competitive advantage as previously described, presently there is no dedicated government funded Antarctic Office based in Christchurch. Concerns from local organisations about this are reflected in the responses from the recent economic impact survey. Responses suggested that Canterbury would benefit from an Antarctic advocacy group and co-ordination office that maintain linkages between all participants, to assist in negotiations and provide a conduit for information. (Saunders et al 2007) This is also reflected in the lack of on-going marketing of the association of Christchurch and Antarctic region. However, Antarctic Link Canterbury is a partnership between Christchurch City Council and a number of local organisations with the aim of promoting the economic benefits to the region from Antarctic activities (Antarctic Link Canterbury 2003).

Innovation and responsiveness to customers can be illustrated by the continued use of Christchurch as the gateway city for the United States Antarctic Programme and Italian Antarctic Programme.

With regard to infrastructure, the combination of Christchurch's international airport, sea port, dry dock and engineering facilities, provides good facilities to support the Antarctic scientific and fishing activities.

Reflecting Porters diamond model of national competitive advantage, the endowment factors for Christchurch are as they are for Hobart: adequate air and sea port facilities, skilled workforce and local service provision.

However, Saunders (2007) notes that the NZ regulatory environment does create certain issues for Antarctic related businesses, compliance costs, time for resource consent, recent changes to labour laws added to the challenges in the current tight labour market along with issues related to immigration were raised by some personnel from the national Antarctic programmes.

## **Conclusion**

This paper has sought to illustrate what factors are necessary to become known as the leading Antarctic gateway city. Porter (1990) and Hill et al (2007) all recognise that it is a combination of factors that lead to having a competitive advantage and therefore "the best". Being the leading gateway is not just the number of tourists using the city for example, Ushuaia and Punta Arenas may have the location and easy access to the Antarctic Peninsula, therefore many more tourists travel through their cities en route to the Antarctic region. However, completing a very simple internet search on both cities reveals very little about what the individual cities offer in way of Antarctic attractions, culture and services, most sites advertise the cruise opportunities only.

With regard to Hobart and Christchurch, both cities provide excellent services, cultural, educational and commercial offerings with regard to their associations with Antarctica. However, it has to be noted that it seems that Hobart has the more coordinated approach, facilitated by the clear stated objectives by the Australian Government and the provision of a dedicated Antarctic office. It has to be emphasised that Christchurch has excellent provision of services to the Antarctic community, but there is scope and opportunity to further improve and promote the profile of Antarctic related activities and services not only to the local community but internationally. The provision of an Antarctic office could, like Hobart provide a co-ordinated

approach to the marketing and positioning of Christchurch as the leading gateway city.

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